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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/813,978	03/22/2001	Naoto Akiyama	Q63677	6052

7590 03/26/2004

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EXAMINER

LUU, AN T

ART UNIT	PAPER NUMBER
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2816

DATE MAILED: 03/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/813,978

**Applicant(s)**

AKIYAMA ET AL.

**Examiner**

An T. Luu

**Art Unit**

2816

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 11-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-13, 16, 17 and 20 is/are rejected.
- 7) ☒ Claim(s) 14, 15, 18 and 19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### DETAILED ACTION

RCE file on 12-22-03 has been received and entered in the case. Claims 1-10 have been cancelled and new claims 11-20 are presented for examination.

#### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 11-13, 16-17 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by the Mentler reference (U.S. Patent 4,308,577).

Mentler discloses in figure 2 an apparatus comprising a transformer 16; at least one switching device (bi-polar transistor 18); a primary side (side having switches 21-23) for controlling current on the primary side of the transformer according to a control signal (signals turning ON/OFF switches 21-23) for controlling the at least one switching device; and a secondary side (side connected to 14-1 and 14-2 circuitries) for directly driving the at least one switch 18. It is inherent that the gate-emitter voltage of the at least one switch is alternately switched between ON and OFF states (i.e., positive and negative) during at least one cycle of the control signal as required by claim 11.

As to claim 12, figure 2 shows the control signal of switches 21 and 22 to transmit power for controlling plural switching devices (30, 34, 40, 42, 56, 58) of the secondary side and prevent back electromotive force (via diodes) caused by current flowing in the transformer is cut off.

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As to claim 13, figure 2 shows of the secondary side receiving the power supplied from the primary side and transmitting the power to a plurality of switching devices (18, 20), such that the plural switching devices simultaneously operates in an identical manner (col. 3, lines 11-24).

As to claim 16, figure 2 discloses plural switching devices (18 or 20) are in series.

As to claim 17, figure 2 shows transistors 18 and 20 being bipolar transistors.

As to claim 20, the scope of this claim is similar to that of claim 1. Therefore, it is rejected for the same reason set forth above.

### ***Response to Applicant's Remarks***

3. Applicant has argued that Mentler can merely perform the claimed second operation mode and does not disclose (or remotely suggest) performing the claimed first operation mode. Examiner completely agrees with the above assertion. However, the recitation of claims calls for either first operation mode or second operation mode. And Mentler fully meets the claimed second operation mode. Therefore, Mentler satisfies each and every limitation required by claims.

### ***Allowable Subject Matter***

4. Claims 14-15 and 18-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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5. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record fail to disclose an apparatus comprising elements being configured specifically as recited in claims.


*Conclusion*

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to An T. Luu whose telephone number is 571-272-1746. The examiner can normally be reached on 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy P. Callahan can be reached on 571-272-1740. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

An T. Luu  
03-18-04 *tl*

  
TIMOTHY P. CALLAHAN  
SUPERVISORY PATENT EXAMINER  
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